

ODT Hub Development Programme

DCD Liver Donor Screening

Purpose of the Paper

The purpose of this paper is to:

- Introduce the requirement for DCD Liver Donor screening
- Describe the concept of formal DCD Liver Donor screening
- Outline a proposal for development and delivery of a screening process.
- Provide an overview of the benefits of screening.

Background

In the UK approximately 5500 patients are referred to the Organ Donation Services (ODS) teams each year as potential DCD donors. These patients undergo high level suitability assessment and screening before the majority proceed to formal characterisation and offering. This results in approximately 550 Proceeding DCD donors each year.

A DCD Assessment pathway was introduced on 1st December 2015 which enables ODS teams to assess patients against the absolute contraindications and agreed DCD exclusions before undertaking formal DCD kidney donor screening if suitability is still in question. The current process for Kidney Screening involves the collation of an agreed basic data set before contacting two transplant centres for an opinion on suitability.

The first centre is always the local transplant centre.

The second centre will be one of four designated regional centres (Cardiff, Guys, Cambridge and Leeds).

Where DCD kidney screening is undertaken and the patient is deemed unsuitable as a kidney donor there is no formal process in place for further organ screening. Liver centres are contacted on an ad-hoc basis by the specialist nurses in organ donation. This process may involve contacting anything from one centre to all centres for an opinion on the patient's suitability to donate their liver. The information is not formally recorded or captured by ODT.

This results in considerable variance in practice throughout the UK and even within individual teams. The extent of these differences remains unknown as does the number of occasions where liver screening is undertaken. Estimates from discussions with ODS teams suggest that Liver screening is undertaken between 30 – 40 times a week.

The screening can involve multiple calls to centres and often requires decisions to be made without all the information that would be relevant.

The DCD Kidney screening process has been highly successful in improving decision making regarding whether a patient has any potential to donate kidneys and therefore should undergo formal characterisation and offering.

This process has had a positive impact on the donor referral process;

- by enabling the specialist nurses to quickly assess a patients potential to donate
- reducing the number of families that are approached for donation when donation is not an option

- reducing the number of unnecessary attendances by NORS teams
- enabling the collation and analysis of screening data
- increasing referring hospitals satisfaction and thereby increasing referral rates

This has also had an impact on the end-of-life-care of patients in critical care environments enabling clinician's access to quicker decisions and avoiding unnecessary treatments, interventions and delays for the dying patient and their family.

The ODS teams have welcomed the kidney screening process formality and the clear guidance which has transformed practice in DCD donor assessment.

In 2015-16 16 patients became DCD Liver only donors. It is possible that this number could be increased through the introduction of formalised DCD Liver donor screening. The ODS teams would support this initiative to further improve the effectiveness and efficiency of the suitability assessment process.

Proposal

1. Develop and agree a core data set that it is possible to collate at initial referral of a potential DCD donor and can enable unsuitable DCD Liver donors to be identified
2. Develop a process for DCD Liver screening.
3. Undertake screening by contacting two centres (if both required)
 - First call to zonal centre for the hospital
 - Second call to a pre-agreed second centre or regional centre. The second centre will need to be agreed in advance as per as yet to be defined criteria.
4. Agree information that will be collated to measure effectiveness and outcomes
5. Agree an implementation proposal and review period

Proposed Screening Method

1. **The purpose of screening is to determine that there is no known reason that donation should not be pursued.**
2. **The recipient centre should inform the SN-OD whether or not they would consider transplanting the organ regardless of whether they have a suitable patient.**
3. DCD Liver Screening will be undertaken only when DCD Kidney screening has resulted in patient exclusion
 Current organ utilisation demonstrates that in DCD donation kidneys are the most likely organ to be donated, followed by liver.
 Screening will first aim to establish if the kidneys are suitable. If suitability is agreed then donor characterisation and organ offering will be undertaken as usual.
 Only when kidneys are declined will liver screening be undertaken.
4. DCD Liver Screening to be undertaken using an agreed minimum data set
 Standardising the information that is required to undertake screening will result in quicker and more effective decision making and will facilitate a nationwide understanding of the information that is required at point of referral.
5. DCD Liver Screening to be undertaken by telephone using an agreed process detailing which centres should be contacted to undertake screening dependent on donor location.
 This would end the current practice of ad-hoc liver screening and ensure that ODS teams follow an agreed process for assessing liver donor suitability.
6. Patient data and outcome of screening to be captured and stored to allow data analysis and review.

Benefits

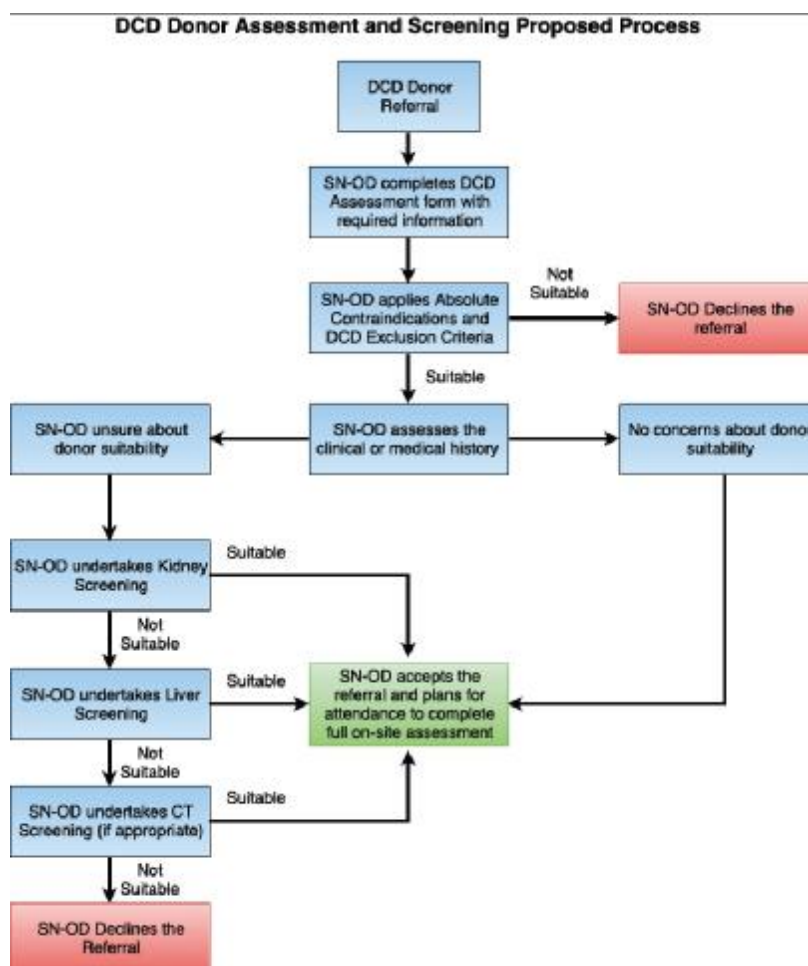
- Improves and standardises the process of determining DCD donor suitability.
- Information provided by ODS teams will be appropriate, to enable suitability assessment to be made at first call.

- Standardising the process to provide guidance on when and how to undertake abdominal organ screening could reduce the number of calls made and make the calls more effective and efficient.
- May increase the number of organs formally offered and accepted
- May reduce the occasions where retrieval teams are mobilised to assess donors inappropriately
- Improves decision making in end-of-life-care minimising delays in the withdrawal of life sustaining treatments (WLST)
- Considerable benefit in Critical Care stakeholder engagement. – quicker appropriate decision making leads to increased referral rate.

Clinical Information

The information currently collected (See Appendix 1) will be amended to include Urinalysis, U&E's, LFT's and Clotting.

Approach to Screening



UK TRANSPLANT REGISTRY



DCD DONOR ASSESSMENT AND KIDNEY SCREENING

Clear form

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INSTRUCTIONS

DCD ASSESSMENT
This form should be completed for all DCD referrals >5kg +/->2 months of age. The DCD Assessment Sections 1, 2 & 4 are intended as guidance to determine DCD donor suitability. If it is felt that a potential donor should be facilitated and normal offering process undertaken, this should be completed and indicated on the form in Section 7. Refer to POL 188 for absolute contraindications to donation. Complete Sections 1-4 sequentially. Ensure Outcome (Section 7) is completed for all referrals.

KIDNEY SCREENING
If screening is required, the SN-OD should make a minimum of one call and a maximum of two calls during the screening process as follows:
a. Call the local designated transplant centre for the donor hospital (complete Section 6)
b. Call the designated screening centre within region (complete Section 8)

The designated screening centres are highlighted in blue in the below tables:

North		Midlands		South West		London	
Belfast	Liverpool	Birmingham	Nottingham	Bristol	Portsmouth	GOSH	St George's
Edinburgh	Manchester	Cambridge	Sheffield	Cardiff		Guy's	WLRTC
Glasgow	Newcastle	Coventry		Oxford		The Royal Free	
Leeds		Leicester		Plymouth		The Royal London	

Please email the completed form using the submit form button to DCDassessment@nhsbt.nhs.uk choosing the 'Share Original Document' format. Once sent please use the clear form button to reset the form.

DONOR DETAILS Section 1

Date of referral: Time (24hr): : Referral method: In person Phone

Donor initials: Donor age: years months Donor gender: PDA/Ref ID:

Donor hospital: ODS team: NHS / CHI Number:

Reason for admission: If other, please specify:

Diagnosis/ Cause of death: If other, please specify:

Is donor suitability assessment required? If No please describe why and complete section ?? SN-OD name:

IDENTIFICATION OF EXCLUSIONS Section 2

Please tick all exclusions that apply

Absolute contraindication to donation? If yes, please specify:

Patient aged over 80 with a non-neurological cause of death Current clinical diagnosis of Ischaemic bowel Previous cancer in last 5 years (excl. primary CNS cancer, localized prostate, thyroid, in situ cervical cancer and non-melanotic skin cancers)

Current clinical diagnosis of multiorgan failure and aged > 40 Current clinical diagnosis of Septicaemia/ Sepsis with severe multi organ dysfunction

If patient has MOF or Sepsis, which organs have dysfunction?
Kidneys Liver Lungs Heart

If an organ is unaffected by MOF or Sepsis the patient should not be excluded and offering should be undertaken as per age related offering guidance. All patients aged 40 or below with MOF should undergo kidney screening at a regional centre

Have you identified an exclusion? If yes, decline for organ donation and proceed to Section 7. If no, proceed to Section 3

CLINICAL HISTORY Section 3

Please tick all that apply

Diabetes Mellitus Type I <input type="checkbox"/>	Evidence of currently deteriorating kidney function <input type="checkbox"/>	Pneumonia <input type="checkbox"/>
Diabetes Mellitus Type II <input type="checkbox"/>	Current diagnosis of acute renal failure <input type="checkbox"/>	Proven Sepsis <input type="checkbox"/>
Peripheral Vascular Disease <input type="checkbox"/>	Current requirement for renal replacement therapy <input type="checkbox"/>	Faecal Peritonitis <input type="checkbox"/>
Hypertension <input type="checkbox"/>	Chronic Kidney Disease: <input type="checkbox"/>	Cardiac Arrest <input type="checkbox"/>
Other Cardiothoracic Disease <input type="checkbox"/>	If yes, please specify: <input type="text" value=""/>	If Yes, indicate downtime: <input type="text" value=""/> hrs <input type="text" value=""/> mins
Liver Disease <input type="checkbox"/>	Urinary Tract Infection <input type="checkbox"/>	
If Yes, is it Alcoholic Liver Disease? <input type="checkbox"/>	Acute Blood Loss <input type="checkbox"/>	
Other relevant history <input type="text" value=""/>		

UK TRANSPLANT REGISTRY

DCD DONOR ASSESSMENT AND KIDNEY SCREENING

ORGAN OFFERING			Section 4
Patient aged <65 <input type="checkbox"/> Consider as potential multi-organ donor.	Patient aged 65-75 <input type="checkbox"/> Consider as potential liver and kidney donor.	Patient aged > 75 <input type="checkbox"/> Consider as potential kidney donor. If kidneys suitable liver should be offered. Consider organ specifics. Kidney screening should be carried out in all patients age > 80.	
Consider if patient has any organ specific contraindications. If donor suitability unclear consider kidney screening, else go to Section 7.			

FIRST SCREENING CALL		Section 6
Local kidney centre	<input type="text"/>	Name of decision maker <input type="text"/>
Date of screening call	<input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="1"/> <input type="text" value="9"/> <input type="text" value="0"/> <input type="text" value="0"/>	Time (24hr) <input type="text" value="H"/> <input type="text" value="H"/> : <input type="text" value="M"/> <input type="text" value="M"/> Decision <input type="text"/>
If not acceptable, please indicate reasons and complete Section 8 (please tick all that apply)		
Donor age <input type="checkbox"/>	Pneumonia <input type="checkbox"/>	Hypertension <input type="checkbox"/>
Cardiac disease <input type="checkbox"/>	UTI <input type="checkbox"/>	DM Type I <input type="checkbox"/>
On RRT > 24 hrs <input type="checkbox"/>	Cardiac arrest <input type="checkbox"/>	Kidney function <input type="checkbox"/>
Other <input type="checkbox"/>	if other, please specify <input type="text"/>	
	Peripheral vascular disease <input type="checkbox"/>	Liver disease <input type="checkbox"/>
	DM Type II <input type="checkbox"/>	Proven sepsis <input type="checkbox"/>
	Acute blood loss <input type="checkbox"/>	

SECOND SCREENING CALL		Section 8
Regional kidney centre	<input type="text"/>	Name of decision maker <input type="text"/>
Date of screening call	<input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="1"/> <input type="text" value="9"/> <input type="text" value="0"/> <input type="text" value="0"/>	Time (24hr) <input type="text" value="H"/> <input type="text" value="H"/> : <input type="text" value="M"/> <input type="text" value="M"/> Decision <input type="text"/>
If not acceptable, please indicate reasons and complete Section 7 (please tick all that apply)		
Donor age <input type="checkbox"/>	Pneumonia <input type="checkbox"/>	Hypertension <input type="checkbox"/>
Cardiac disease <input type="checkbox"/>	UTI <input type="checkbox"/>	DM Type I <input type="checkbox"/>
On RRT > 24 hrs <input type="checkbox"/>	Cardiac arrest <input type="checkbox"/>	Kidney function <input type="checkbox"/>
Other <input type="checkbox"/>	if other, please specify <input type="text"/>	
	Peripheral vascular disease <input type="checkbox"/>	Liver disease <input type="checkbox"/>
	DM Type II <input type="checkbox"/>	Proven sepsis <input type="checkbox"/>
	Acute blood loss <input type="checkbox"/>	

OUTCOME		Section 7
Is a SN-OD assessing the patient in person? <input type="checkbox"/>	If SN-OD did not assess the patient in person, please provide rationale If other, please specify	<input type="text"/>
Donor number generated <input type="checkbox"/>	If Yes, please provide donor number	<input type="text"/>
Was an identified DCD exclusion overruled? <input type="checkbox"/>	If identified DCD exclusion overruled, please provide reason If other, please specify	<input type="text"/>
Did donation proceed? <input type="checkbox"/>	If donation did not proceed, please provide reason If other, please specify	<input type="text"/>

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